

WHAT IS CLAIMED IS:

1. A brush seal for sealing a rotor with respect to a stator, comprising:

a bristle housing configured to be arranged on a first one of the rotor and the stator, the bristle housing including a cover plate, a supporting plate, a circumferential surface and two side surfaces;

bristles fastened in the bristle housing, the bristles including free ends oriented toward a second one of the rotor and the stator;

a first positioning arrangement provided on at least one of the circumferential section and at least one side surface; and

a second positioning arrangement provided on one of the rotor, the stator and a fastening element;

wherein the first positioning arrangement and the second positioning arrangement are configured to interact in a positive-locking manner and to provide definite positioning of the bristle housing.

2. The brush seal according to claim 1, wherein a first one of the first positioning arrangement and the second positioning arrangement includes a projection and a second one of the first positioning arrangement and the second positioning arrangement includes a recess.

3. The brush seal according to claim 1, wherein at least one of the cover plate and the supporting plate is formed by non-cutting shaping.

4. The brush seal according to claim 3, wherein the non-cutting shaping includes deep drawing.

5. The brush seal according to claim 1, wherein the bristle housing is formed by flanging the cover plate and the supporting plate.

6. The brush seal according to claim 1, wherein the first positioning arrangement includes at least one spot weld that projects beyond the circumferential surface, the second positioning arrangement including a recess formed in one of the stator and the rotor, the at least one spot weld being engageable in the recess.

7. The brush seal according to claim 1, wherein the first positioning arrangement includes at least one integral projection that projects beyond at least one side surface, the second positioning arrangement including a recess formed in one of the stator, the rotor and the fastening element, the at least one integral projection being engageable in the recess.

8. The brush seal according to claim 7, wherein the projection is formed during non-cutting shaping of at least one of the cover plate and the supporting plate.

9. The brush seal according to claim 7, wherein the projection is one of lenticular and conical.

10. The brush seal according to claim 1, wherein a first one of the cover plate and the supporting plate includes a flanged section and a second one of the cover plate and the supporting plate includes an axial section extending beyond one of the side surfaces, the axial section being disposed at an end of the second one of the cover plate and the supporting plate close to the circumferential surface, the flanged section enclosing a free end of the axial section, the flanged section having a free end projecting radially beyond the free end of the axial section and forming an undercut.

11. The brush seal according to claim 10, wherein the flanged section includes an inner side surface forming the undercut, the inner side surface being disposed at a distance from side surface of the second one of the cover plate and the supporting plate.

12. The brush seal according to claim 10, the first positioning arrangement and the second positioning arrangement includes at least one pair of holes arranged in alignment in the first one of the stator and rotor, the axial section and the flange section, the at least one pair of holes being configured to receive a fastener.

13. The brush seal according to claim 12, wherein the fastener includes at least one of a rivet and a bolt.

14. The brush seal according to claim 1, wherein the bristles are arranged at an angle of 40° to 50° to a radial direction.